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State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

July 29, 2016

Michael Dalley
Staker Parson Companies
89 West 13490 South, Suite 100
Draper, Utah 84020

Subject: Second Review of Notice of Intention to Commence Large Mining Operations, Staker Parson Companies, Heber Binggeli Quarry, M/051/0015, Wasatch County, Utah

Dear Mr. Dalley:

The Division of Oil, Gas and Mining has reviewed the referenced Notice of Intention to Commence Large Mining Operations (Notice) which was received June 9, 2016. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. Please address only those items requested in the attached technical review by sending replacement pages for the original Notice using redline and strikeout text. After the Notice is determined technically complete, the Division will ask that you submit two clean copies. Upon final approval, both will be stamped approved, and one copy will be returned for your records.

Please submit your response to this review by September 26, 2016.

The Division will suspend further review of the Notice of Intention until your response to this letter is received. Please contact Leslie Heppler, at 801-538-5257 or me at 801-538-5261 if you have questions concerning the review. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker
Minerals Program Manager

PBB: lah: eb
Attachment: Review
cc: Wasatch County – planning@co.wasatch.ut.us
P:\GROUPS\MINERALS\WP\M051-Wasatch\M0510015-HeberBinggeli\final\REV2-7405-06232016.docx

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UTAH DNR
OIL, GAS & MINING

SECOND REVIEW OF NOTICEOF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Staker Parson Companies
Heber Binggeli Quarry
M/051/0015
July 19, 2016

General Comments:

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
1		The Division may have additional comments based on the review responses.	lah	

R647-4-104 – Operator Information and Surface and Mineral Ownership

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
2	Page 6	Cover letter, cover page and the footer of the Notice list the name of the mine as the Heber Binggeli Quarry; on Page 6 the Mine name is listed as Facility. Please use the same name throughout.	lah	
3	Page 7	*Previous Comment - Further define Section 23 as NE¼ of the NE¼; Section 14 as S½ of SE¼; and Section13 as the S½. (The comment is based on the cultural resources survey map.)* New comment – Thank you for defining sections 23, 14 and 13. In addition please define section 24 in the same manner, as shown on Figure 2. Please also add SLBM back into the sentence.	lah lah	
4	Page 7	Please add ownership of minerals when the data is completed.	lah	
5	Page 7 and figure 2	Please add the owner of the parcel southwest of the Continental leasing and the parcel around the Deer Creek Storage.	lah	

R647-4-105 - Maps, Drawings & Photographs

General Map Comments

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
6	Page 8	The Division's lead agrees with the operator's comment D7 (no response needed).	lah	
7	General	The irrigation canal referred to in the Notice is presumably Daniels Creek. Please label the irrigation canal on the applicable maps for clarity.	aa	

105.1 - Topographic base map, boundaries, pre-act disturbance

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
8	Figure 1	Please adjust the scale to 1"=2000'.	mpb	
9	Figure 1, 2, or 3	Please show items required in R647-4-105.1, including other bodies of water (irrigation canal), electrical transmission lines, water wells, oil and gas pipelines, etc., within 500 feet of the disturbed area boundary.	mpb	

105.2 - Surface facilities map

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
10	Figure 3 and page 9	Not all topsoil stockpiles are included on the map. Fig. 3 only shows one of the existing stockpiles. It does not seem likely that soils from the proposed mining area will be transported to that area. Also, site inspections have shown more topsoil storage areas than one. Please show both existing and planned future stockpiles.	lah lk	

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
11	Figures 7	Please highlight the irrigation canal on this map and identify it in the legend. Please show the drainage ditch linetype in the legend. Please show surface flow arrows to indicate how stormwater on the ground surface reaches the fines collection ponds and two sediment ponds.	mpb	
12	Figures 8	Please highlight the irrigation canal on this map and identify it in the legend. The irrigation canal and berms shown on Figure 7 would effectively partition the four basins shown on Figure 8 into smaller areas. This would affect the calculations shown on this figure. The irrigation canal and berms will likely divert most, or all, of the run-on from Basins 3 and 4 through the site, and block the run-on from Basins 1 and 2 against up-gradient berms along the canal.	mpb	
13	Figure 9	This figure is identified in the text as the reclamation map, but it does not show the areas where different reclamation treatments will be located. Based on this map, one would need to assume all areas will be ripped, have the same amount of topsoil applied, the same type and rates of soil amendments, etc. Please provide a reclamation map that shows where the various reclamation treatments will be used.	lk	
14	Figure 10	Slope angles are not clear on this figure. Please make the proposed slope angles clear. A general note on the page, such as, "All proposed slopes are less than 2H:1V except where marked." Then simply label the two other slopes as the slopes are designed, such as 1H:1V.	lah	

R647-4-106 - Operation Plan

106.2 - Type of operations - mining method, onsite processing, deleterious or acid-forming materials

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
15	Pg. 11	The first sentence says, "It is not expected any deleterious or acid forming materials will be present on site, or left on site as a result of mining." By rule, the definition of deleterious materials includes introduced materials, i.e. fuels, oils, chemicals, reagents, etc., of a toxic or hazardous nature and regulated by various government agencies such as the EPA, DEQ, etc. See the following comment about providing an inventory of toxic or hazardous materials that would be stored or used within the permit boundary.	mpb	
16	Pg. 18	Ground Water: Third paragraph in this section says "All fuels and chemicals will be stored in approved tanks and containers." Please list and provide quantities for all regulated fuels and chemicals within the permit area boundary. Show locations of these materials being stored within the permit area on Figure 03. If none of these materials are stored within the permit boundary, please revise the referenced statement to say that.	mpb	

106.3 - Estimated acreages disturbed, reclaimed, annually/sequentially

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
17	Page 12, Table 1	Please re-work the text in the first paragraph and Table 1 so that numbers correlate. The text identifies 140 acres of existing disturbance, but Table 1 shows 119 acres. The text identifies 62 acres of additional disturbance, Table 1 shows 82 acres.	lk	
18	Table 1	At the proposed 50,000 cubic yards of topsoil salvaged (or to be salvaged?), less than five inches will be salvaged, yet with the minimum rate of 14 inches identified in Section 106.5, over 154,000 cubic yards is available. Even the total life of mine disturbance amount does not provide sufficient soil for the proposed minimum of six inches of soil (over 188,000 cubic yards is needed). Where will the rest of the soil needed come from?	lk	
19	Table 1	Regarding the 'Topsoil Stockpiles' line, is the volume listed the current volume of the stockpile, or what you expect to salvage from the topsoil stockpile area shown on the map (Figure 3)?	lk	

106.5 - Existing soil types, location, amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
20	Page 13, Appendix B	Appendix B has four soil analysis reports, not two. It does not contain a map showing where the samples were taken. Why was only the top six inches analyzed when the survey shows up to 40 inches of soil? Testing should have been done throughout the profile at either 6-inch intervals, or for each soil horizon, if horizons are thin. If, as stated, all available soil will be salvaged, then all should be analyzed to assure suitability or what amendments, fertilizers, etc may be needed to make it suitable.	lk	

106.6 - Plan for protecting & re-depositing soils

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
21	Page 13	(This comment is listed here because the text in the NOI is listed under this heading. This should really be discussed under rule R647-4-106.5) As previously stated, soil volume estimates appear to be excessively low – not even six inches (based on the numbers provided) will be salvaged on areas that have potentially 40 inches of soil. Yet, it is stated that "every effort will be made to salvage topsoils." As per comments regarding Table 1, as presently identified, there will be a significant shortfall of soil material for the six-inch depth. If 10 acres are disturbed and yield only 4,000 cubic yards, then less than three inches is being salvaged. However, based on what is potentially suitable for use as topsoil (based on soil descriptions), the 82 acres of future disturbance could generate in excess of 200,000 to 300,000 cubic yards.	lk	
22	Page 13	This section does not provide a plan for protecting topsoil stockpiles from further impacts until they are used for reclamation. For example, will stockpiles be identified with signs? Will berms or other barriers be used to prevent accidental impacts from vehicles? Will stockpiles be seeded to control erosion? If so, what species will be used for stockpile protection? Will other erosion control measures be utilized? Please see Section109.3 of this review for suggested protection measures.	lk	

106.7 - Existing vegetation - species and amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
23	Page 14 SWCA Report	The SWCA report (Appendix D) does not contain a comprehensive list of species for each vegetation type; it only lists a few of the very common species. Likewise, this report does not contain data on the percent ground cover of vegetation for each type. This data is needed to fully evaluate reclamation/revegetation plans and establish reclamation standards. If this data is not available, additional vegetation surveys will be required.	lk	
24	Appendix D	Four listed noxious weeds were identified on the area, including saltcedar, Dalmatian toadflax, musk thistle and field bindweed. Without aggressive control measures these species could dramatically impact revegetation success. Please provide plans to control these species within the permit area. The Utah Noxious Weed Act prohibits movement of noxious weed propagules, such as seeds and rhizomes. Failure to control weeds on the mine site during operations could allow these weeds to be spread to highway or other projects.	Lk pbb	

106.8 - Depth to groundwater, extent of overburden, geologic setting

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
25	Page 14	Water well information obtained from the Division of Water Rights logs indicate that groundwater was detected at levels as shallow as 40 feet below ground surface (bgs) (refer to Water Right (WR) No. 55-1216). Most of these wells are concentrated in the valley fill deposits (Qa on the geologic map). An alluvial aquifer appears to exist between 5370 – 5440 above mean sea level. The mine plan states that the final floor elevation will be 5475; therefore groundwater is not expected to be encountered during mining operations. Please update the well log information to include the depth to water date from WR 55-1216.	aa	
26	Page 14 Para 3	As written, "ground water is found approx 65-110 feet below ground surface". Please change from "feet below ground surface" to "water elevation varies from * to *."	lah	
27	Page 14 Para 4	As written, "4-6 inches of topsoil" is not consistent with page 13. The Division recommends that this be rewritten to be consistent with page 13, such as "There is 1-4 inches of topsoil overburden on the ridgelines, and there is 4-16 inches of overburden topsoil on the valley floor."	lah	
28	Page 15 Para 1	The Description of the Bear Canyon Member is a regional description of the geological unit. The Division suggests referring to Figure 05 and including in the text the local geology at the mine site. Specifically note the strike and dip of the Bear Canyon Member at the mine site, in the text on page 15, and note if the proposed elevation of the mine will intersect either the Deer Creek detachment zone or the Bridal Veil Limestone Member. (Based on the pit elevation of 5475 feet, it is not likely, but it is not clear to the Division if there is subsurface data available.)	lah	

106.9 - Location & size of ore and waste piles, tailings, ponds

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
29	Pg 16	Water Storage/Treatment Ponds statement says there is a 10,000-gallon water tank on site. Please show it on the facilities map.	mpb	

R647-4-108 - Hole Plugging Requirements

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
30	Page 17 Para 3	As written, " into a producing and/or monitoring well. . . ." An artesian monitoring well would be a liability to the surface owner (versus a producing well). Please rewrite the statement to conform with R647-4-108.	lah	

R647-4-109 - Impact Assessment

109.1 – Projected impacts to surface & groundwater systems

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
31	Pg 18	The first sentence on this page states that the SWPPP will be located "with the Staker Parson Companies Area Manager for review." It is not clear if this location is on site or not. By rule, a copy of the SWPPP must be kept on site. Please clarify.	mpb	
32	Page 18 Para 2	As written, " ground water is found approx 65-110 feet below ground surface". Please change from "feet below ground surface" to "water elevation varies from * to *."	lah	

109.3 – Projected impacts on existing soils resources

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
33	Page 18 Last para	As written, "no greater than 1.5H:1V". Although it is possible to have topsoil with a friction angle to support the 1.5H:1V slope, it is not likely. Please rewrite to include "…1.5H:1V or a stable configuration."	lah	
34	Page 18	The discussion here does not really address impacts to the soil resources. It does, however, discuss plans to mitigate impacts to soils, and should more logically be located under 109.5. Please provide a brief discussion of the impacts to soil resources. The Division offers the following concerning best management practices for soil stockpiles. Piles should be shallow (maximum depth of 10-15 feet) and have shallow slopes (no steeper than 2.5H:1V and preferred 3H:1V or flatter). It is better to have several small stockpiles than one large one. (Please note that only one stockpile is shown on the map, even though this section refers to 'sites'.) Topsoil piles should be bermed to contain soil eroding from the pile, and they should be signed to protect against accidental impacts. Topsoil stockpiles should be seeded with a quick-growing cover to reduce erosion. Species usually include grasses and forbs (no shrubs). This section states it will be seeded with a mix recommended by DOGM. The Division will be glad to provide a recommendation; please contact Lynn Kunzler.	lk	

109.4 – Projected impacts on slope stability, erosion control, air quality, public health and safety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
35	Page 19	Please include verbiage on how access will be limited to the highwall from the south.	lah	

109.5 - Actions to mitigate any impacts

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
36	Page 20	Refer to comments made under Section 109.3 of this review.	lk	

R647-4-110 - Reclamation Plan

General comment reclamation plan

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
37	Omission	Figure 09 is a good stand alone figure. The Division including a Figure 09A that would be a reclamation treatments figure. On such a figure, gray out the contours, "turn off" the section lines, and add graphics which show the proposed "reclamation plan." A figure would eliminate detailed verbiage in the text. The figure can be amended or revised in the future, but it would work well for line item bond releases in the future.	lah	

110.1 – Land Use Plans

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
38	Page 21	What are the current land uses of the areas to be disturbed? Likely uses are agriculture, grazing and wildlife habitat.	lk	

110.2 – Reclamation of roads, highwalls, slopes, impoundments, drainages, pits, piles, shafts, adits, etc

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
39	Page 21	As written, "road (s)". Please include a description on how roads will be reclaimed, as it is typical to allow roads to remain for a post mining land use, but not all the current mining roads are usually needed for agriculture use. This is needed for bond calculations. The roads to be retained should be shown on a reclamation treatments map. Both the maps and the text need to be consistent.	lah	
40	Page 21	As written, "no highwall will be left greater than 2H:1V". This is not consistent with either Figure 09 or 10. The Division does have a preference for the written verbiage.	lah	

110.5 - Revegetation planting program

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
41	Page 24	Six inches of topsoil replacement is not adequate for re-establishment of agricultural uses, especially when the soil survey shows significantly more soil is available (up to 40 inches with some soil types, and generally between 11 and 16 inches). Please plan to replace a minimum of 12 inches of soil in areas that will be developed for agricultural uses.	Lk	

R647-4-112 - Variance

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
42		No variance requested; no further action needed	lah	

R647-4-113 – Surety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
43		Please submit detailed reclamation cost estimates using the Division's bond forms.	whw	